

## **ABSTRACT**

### **An amplifier system for satellites**

The present invention relates to an amplifier system for satellites, in particular for radio-frequency amplifier systems incorporating travelling wave tube amplifiers and used in space repeaters. The amplifier system (1) includes two amplifier modules ( $A_1$ ,  $A_2$ ) each having an input and an output, a signal divider (D) having an input, a first output, and a second output, a signal combiner (C) having a first input, a second input and an output. The first output of the divider (D) is connected to the input of the first amplifier module ( $A_1$ ) via a connection length  $Le_1$ . The second output of the divider (D) is connected to the input of the second amplifier module ( $A_2$ ) via a connection length  $Le_2$ . The output of the first amplifier module ( $A_1$ ) is connected to the first input of the combiner (C) via a connection length  $Ls_1$ . The output of the second amplifier module ( $A_2$ ) is connected to the second input of the combiner (C) via a connection length  $Ls_2$ . The connection length satisfies the equation  $Le_1 + Ls_1 = Le_2 + Ls_2$  and the connection length  $Ls_1$  is different from the connection length  $Ls_2$ .

**Figure to be published: figure 1**